Power models

1. Direct Variation Power Models: $y = kx^r$

Examples: $y = 2x$ $\quad y = -3x^2$

$y = 5x^3$ $\quad y = x^4$

2. Inverse Variation Power Models: $y = \frac{k}{x^r}$

Examples: $y = \frac{2}{x^2}$ $\quad y = \frac{-7}{8x^3}$

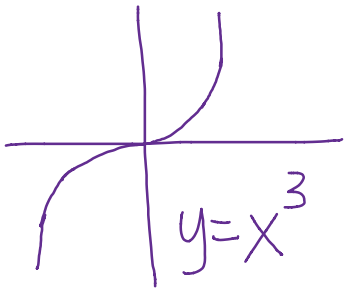
$y = \frac{-1}{x^5}$ $\quad y = \frac{1}{5x^4}$

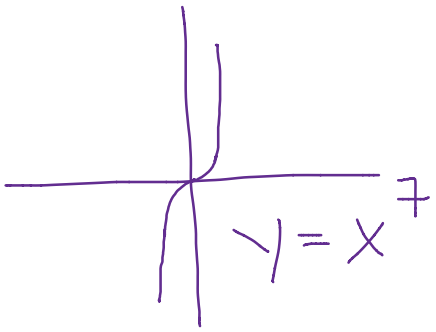
3. Odd Power Models

$y = x^3, y = x^5, y = x^7, y = x^9, \ldots$

— All odd power model graphs look like cubic functions (except when the exponent = 1)

- The greater the exponent the steeper the graph.





4.Even Power Models

$y=x^2, y=x^4, y=x^6, y=x^8, \ldots\ldots$

- All even numbered power models look like parabolas.
- The greater the exponent the steeper the parabola.